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EXAMINER	
GILLIS, BRIAN J	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/691,109	CONTA ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-9 and 14-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 14-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 31, 32, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Shrader (US Patent #5,864,666).

(Claim 31 discloses) an application-programming interface (API) for implementing a plurality of different tunneling protocols in a switch or router, said API comprising: a) a tunneling interface data structure having a plurality of parameters (Shrader shows a tunnel interface has a plurality of parameters (column 9, lines 5-59).); and b) a plurality of functions for setting the parameters of the tunneling interface data structure, wherein a tunneling interface data structure is configurable to implement any one of said plurality of different tunneling protocols by using at least some of said plurality of functions (Shrader shows the tunnel interface has various functions to implement tunneling by using the functions (column 6, lines 25-37)).

(Claim 32 discloses) the API according to claim 31, wherein: said plurality of parameters including a local source address and a remote destination address (Shrader shows the parameters include source and target information (column 9, lines 5-25)).

(Claim 36 discloses) the API according to claim 31, wherein: said plurality of functions includes an address function to set tunnel interface source and destination addresses (Shrader shows creating new settings including setting the source and destination addresses (column 6, lines 25-37)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 15, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication).

Claim 1 discloses a uniform method for implementing multiple tunneling protocols in a switch or router having a plurality of input interfaces and a plurality of output

interfaces, comprising: a) providing a finite set of tunnel interfaces, each tunnel interface characterized by a set of tunnel specific attributes, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol; b) mapping one of the input interfaces to one of said tunnel interfaces; and c) mapping said one of said tunnel interfaces to one of the output interfaces, whereby multiple tunneling protocols are implemented in a uniform way. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel (column 3, lines 34-45), the tunnel identifier is used to map the input to a particular tunnel (column 3, lines 30-36), and an output interface is selected based on the tunnel specific information (column 3, lines 36-45). It fails to teach a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol. Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 2 discloses the method according to claim 1, wherein: said tunnel specific attributes include parameters identifying tunnel end points. Hauck further teaches the aggregate flow block has an outgoing label, which includes identifying the end points (column 12, lines 46-59).

Claim 3 discloses the method according to claim 1, wherein: said step of mapping one of the input interfaces to one of said tunnel interfaces is performed by using context data in an arriving packet as a first search key to a first database. Hauck further teaches the first packet has data, which is used to map the flow of packets (column 6, lines 1-7).

Claim 4 discloses the method according to claim 3, wherein: said arriving packet has a header and said context data is obtained from said header. Hauck further teaches the label data is obtained from the header (column 5, lines 59-62).

Claim 5 discloses the method according to claim 4, further comprising: d) processing said header with said one of said tunnel interfaces to obtain a new header, wherein said step of mapping said one of said tunnel interfaces to one of the output interfaces is performed by using the new header as a second search key to a second database. Hauck further teaches the label is translated to be used as the outgoing label (column 7, lines 46-49).

Claim 6 discloses the method according to claim 1, wherein: both said step of mapping one of the input interfaces to one of said tunnel interfaces and said step of mapping said one of said tunnel interfaces to one of the output interfaces are performed by using context data in an arriving packet as a first search key to a first database.

Hauck further teaches the label of the first packet is used to map the input and output interfaces (column 10, lines 39-63).

Claim 7 discloses the method according to claim 6, wherein: said arriving packet has a header and said context data is obtained from said header. Hauck further teaches the first packet has a header and data is obtained from it (column 10, lines 39-44).

Claim 8 discloses the method according to claim 4, wherein: the one of the output interfaces is one of an L2 (layer two) and an L3 (layer three) interface, and said step of using the new header as a second search key to a second database yields one of an L2 and an L3 interface. Hauck further teaches the interfaces involved are layer 2 or layer 3 (Abstract, column 3, lines 3-19).

Claim 15 discloses a uniform method for implementing multiple tunneling protocols in a switch or router having a plurality of input streams and a plurality of output streams, comprising: a) providing a finite set of tunnel interfaces, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol; and b) mapping input streams and output streams to tunnel interfaces for different tunneling protocols in a uniform manner. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel (column 3, lines 34-45), and the tunnel identifier is used to map inputs to a particular tunnel and an output interface is selected based on the tunnel specific information (column 3, lines 30-45). It fails to teach a first of said

tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol. Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 22 discloses a uniform method for implementing multiple tunneling protocols in a switch or router, comprising: providing a plurality of tunnel interfaces, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol, each tunnel interface having a plurality of parameters which are described in a uniform way, said plurality of parameters including a local source address and a remote destination address. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel including source and destination addresses (column 3, lines 34-45, column 12, lines 46-59). It fails to teach a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol.

Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 25 discloses the method according to claim 22, further comprising: providing a plurality of tunnel entry node structures and a plurality of tunnel exit node structures. Hauck further teaches multiple entry and exit node structures (figure 1A).

Claims 9 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Hauck (US Patent #6,977,932).

Claim 9 discloses a uniform method for implementing multiple tunneling protocols in a switch or router, comprising: a) associating an input interface, an output interface, and an information database with each of said multiple tunneling protocols; b) associated a mapping interface and a mapping information base with each of said multiple tunneling protocols; and c) uniformly implementing a tunneling protocol by selecting an input interface, an output interface, and an information database associated with the tunneling protocol to be implemented. Shrader teaches each tunnel has an association with an input and output and any other pertinent information including an information database (column 9, lines 5-20), and each tunnel has an

encryption policy and an associated encryption algorithm (column 9, lines 5-20). It fails to teach selecting an input interface, an output interface, and an information database associated with the tunneling protocol to be implemented. Hauck teaches selecting the appropriate tunnel based on the information received from the aggregate flow block (column 3, lines 30-45).

Shrader and Hauck are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the selection feature in Hauck with the system in Shrader because all of the data may be processed similarly without introducing prohibitively time consuming and processor intensive tasks (Hauck, column 3, line 61 – column 4, line 2).

Claim 35 discloses the API according to claim 31, further comprising: c) a plurality of tunnel entry node structures; and d) a plurality of tunnel exit node structures. Shrader teaches the limitations of claim 31 as recited above. It fails to teach a plurality of tunnel entry node structures and a plurality of tunnel exit node structures. Hauck teaches multiple entry and exit node structures (figure 1A).

Shrader and Hauck are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the multiple entry and exit node structures in Hauck with the system in Shrader because all of the data may be processed similarly without

introducing prohibitively time consuming and processor intensive tasks (Hauck, column 3, line 61 – column 4, line 2).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Hauck (US Patent #6,977,932) as applied to claim 9 above, and further in view of applicant admitted prior art (AAPA).

Claim 14 discloses the method according to claim 9, wherein: for ETHERNET over MPLS (multiprotocol label switching) tunnel origination, the input interface is an ETHERNET interface, the output interface is an L2 (layer 2) interface, and the information database is a switching information base. Shrader in view of Hauck teaches the limitations of claim 9 as recited above. It fails to teach an input interface as an ETHERNET interface, the output interface is an L2 interface, and the information database is a switching information base. AAPA teaches using ETHERNET over MPLS, an interface is a layer 2 interface (page1, line 22 – page 2, line 2), and the FEC-to-NHLFE map is a switching information base (page 7, lines 5-10).

Shrader in view of Hauck and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the ETHERNET over MPLS interface in AAPA with the system in Shrader in view of Hauck because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claims 16-21, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent

Publication) as applied to claims 15 and 22 above, and further in view of Miller et al (US Patent #6,873,627).

Claim 16 discloses the method according to claim 15, wherein: some of the input streams are L2 (layer two) streams and some of the input streams are L3 (layer 3) streams, said step of providing a finite set of tunnel interfaces includes providing a set of L2 tunnel interfaces for L2 input streams and a set of L3 tunnel interfaces for L3 input streams. Hauck in view of Greaves teaches the limitations of claim 15 as recited above. It fails to teach some of the input streams are L2 streams and some of the input streams are L3 streams, said step of providing a finite set of tunnel interfaces includes providing a set of L2 tunnel interfaces for L2 input streams and a set of L3 tunnel interfaces for L3 input streams. Miller et al teaches a packet forwarding system, which can transfer any type of data including L2 and L3 streams (column 8, lines 27-48).

Hauck in view of Greaves and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the forwarding system in Miller et al with the system in Hauck in view of Greaves because a simple, low risk way to configure a network with multicast functionality is provided (Miller, column 8, lines 27-48).

Claim 17 discloses the method according to claim 16, wherein: input streams are mapped to tunnel interfaces by a forwarding function. Miller et al further teaches using forwarding rules, which are used to map data (column 8, lines 49-62).

Claim 18 discloses the method according to claim 16, wherein: L2 input streams are mapped to L2 tunnel interfaces by a first forwarding function, and L3 input streams are mapped to L3 tunnel interfaces by a second forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 19 discloses the method according to claim 18, wherein: some of the output streams are L2 streams and some of the output streams are L3 streams, L2 tunnel interfaces are mapped to L2 output streams by a third forwarding function, and L3 tunnel interfaces are mapped to L3 output streams by a fourth forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 20 discloses the method according to claim 19, wherein: L2 tunnel interfaces are mapped to L3 output streams by a fifth forwarding function, and L3 tunnel interfaces are mapped to L2 output streams by a sixth forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 21 discloses the method according to claim 17, wherein: the forwarding function performs mapping based on context data associated with input packets and database information which is configured and updated by a local host. Hauck further teaches the first packet has data, which is used to map the flow of packets (column 6, lines 1-7).

Claim 23 discloses the method according to claim 22, wherein: said plurality of parameters includes a hop limit or time to live. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to teach including a hop limit or time to live. Miller et al teaches including a hop count, which can be set to a limit (column 12, lines 35-49).

Hauck in view of Greaves and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hop count in Miller et al with the system in Hauck in view of Greaves because the number of servers through which a packet is allowed to travel is limited (Miller, column 11, lines 45-46).

Claim 28 discloses the method according to claim 23, further comprising: providing a hop function to set the hop limit for a tunnel interface. Miller et al further teaches having the ability to set the hop limit (column 12, lines 35-49).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) in view of Miller et al (US Patent #6,873,627) as applied to claim 23 above, and further in view of Rekhter et al (US Patent #6,339,595).

Claim 24 discloses the method according to claim 23, wherein: said plurality of parameters includes a tunnel MTU (maximum transmission unit). Hauck in view of Greaves in view of Miller et al teaches the limitations of claim 23 as recited above. It

fails to teach including a tunnel MTU. Rekhter et al teaches including a MTU (column 41, lines 40-60).

Hauck in view of Greaves in view of Miller et al and Rekhter et al are analogous art because they are both related to sending data between networks in tunnels.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the MTU in Rekhter et al with the system in Hauck in view of Greaves in view of Miller et al because it will make possible to route to a source address of a fragmented packet (Rekhter, column 41, lines 40-60).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) as applied to claim 22 above, and further in view of Shrader (US Patent #5,864,666).

Claim 26 discloses the method according to claim 22, further comprising: providing an address function to set tunnel interface source and destination addresses. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to teach providing an address function to set tunnel interface source and destination addresses. Shrader teaches creating new settings including setting the source and destination addresses (column 6, lines 25-37).

Hauck in view of Greaves and Shrader are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the edit settings feature in Shrader with the system in Hauck in

view of Greaves because a user is provided with an interface to administer IP tunneling (Shrader, column 1, lines 31-33).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) in view of Shrader (US Patent #5,864,666) as applied to claim 26 above, and further in view of Tsirtsis (US PGPUB US2004/0148428).

Claim 27 discloses the method according to claim 26, further comprising: providing a first address function for IPv4 (internet protocol version four) interfaces and a second address function for IPv6 (internet protocol version six) interfaces. Hauck in view of Greaves in view of Shrader teaches the limitations of claim 26 as recited above. It fails to teach providing IPv4 and IPv6 interfaces. Tsirtsis teaches using both IPv4 and IPv6 (paragraph 32).

Hauck in view of Greaves in view of Shrader and Tsirtsis are analogous art because they are both related to packet tunneling.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the interface in Tsirtsis with the system in Hauck in view of Greaves in view of Shrader because the data is able to be moved in networks that support IPv4, IPv6, or both (Tsirtsis, paragraph 32).

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) as applied to claim 22 above, and further in view of applicant admitted prior art (AAPA).

Claim 29 discloses the method according to claim 22, wherein: said plurality of parameters includes MPLS (multiprotocol label switching) encapsulation information and actions to be performed on MPLS packets. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to tech of including MPLS encapsulation information and actions to be performed on MPLS packets. AAPA teaches an incoming label map, which specifies what actions to take when a packet is received (page 6, line 21 – page 7, line 3).

Hauck in view of Greaves and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the incoming label map in AAPA with the system in Hauck in view of Greaves because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claim 30 discloses the method according to claim 29, further comprising: providing an MPLS function to associate an MPLS LIB (label information base) with an MPLS interface. AAPA further teaches an incoming label map is built by being associated with information from the label distribution protocol engine (page 6, line 21 – page 7, line 3).

Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Miller et al (US Patent #6,873,627).

Claim 33 discloses the API according to claim 32, wherein: said plurality of parameters includes a hop limit or time to live. Shrader teaches the limitations of claim

32 as recited above. It fails to teach including a hop limit or time to live. Miller et al teaches including a hop count, which can be set to a limit (column 12, lines 35-49).

Shrader and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hop count in Miller et al with the system in Shrader because the number of servers through which a packet is allowed to travel is limited (Miller, column 11, lines 45-46).

Claim 38 discloses the API according to claim 33, wherein: said plurality of functions includes a hop function to set the hop limit for a tunnel interface. Miller et al further teaches having the ability to set the hop limit (column 12, lines 35-49).

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Miller et al (US Patent #6,873,627) as applied to claim 33 above, and further in view of Rekhter et al (US Patent #6,339,595).

Claim 34 discloses the API according to claim 33, wherein: said plurality of parameters includes a tunnel MTU (maximum transmission unit). Shrader in view of Miller et al teaches the limitations of claim 33 as recited above. It fails to teach including a tunnel MTU. Rekhter et al teaches including a MTU (column 41, lines 40-60).

Shrader in view of Miller et al and Rekhter et al are analogous art because they are both related to sending data between networks in tunnels.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the MTU in Rekhter et al with the system in Shrader in view of

Miller et al because it will make possible to route to a source address of a fragmented packet (Rekhter, column 41, lines 40-60).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Tsirtsis (US PGPUB US2004/0148428).

Claim 37 discloses the API according to claim 36, wherein: said plurality of functions includes a first address function for IPv4 (internet protocol version four) interfaces and a second address function for IPv6 (internet protocol version six) interfaces. Shrader teaches the limitations of claim 36 as recited above. It fails to teach providing IPv4 and IPv6 interfaces. Tsirtsis teaches using both IPv4 and IPv6 (paragraph 32).

Shrader and Tsirtsis are analogous art because they are both related to packet tunneling.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the interface in Tsirtsis with the system in Shrader because the data is able to be moved in networks that support IPv4, IPv6, or both (Tsirtsis, paragraph 32).

Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of applicant admitted prior art (AAPA).

Claim 39 discloses the API according to claim 31, wherein: said plurality of parameters includes MPLS (multiprotocol label switching) encapsulation information and actions to be performed on MPLS packets. Shrader teaches the limitations of claim 31 as recited above. It fails to tech of including MPLS encapsulation information

and actions to be performed on MPLS packets. AAPA teaches an incoming label map, which specifies what actions to take when a packet is received (page 6, line 21 – page 7, line 3).

Shrader and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the incoming label map in AAPA with the system in Shrader because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claim 40 discloses the API according to claim 39, wherein: said plurality of functions includes an MPLS function to associate an MPLS LIB (label information base) with an MPLS interface. AAPA further teaches an incoming label map is built by being associated with information from the label distribution protocol engine (page 6, line 21 – page 7, line 3).

Response to Arguments

Applicant's arguments filed July 26, 2007 have been fully considered but they are not persuasive.

Applicant asserts the prior art fails to teach or disclose different tunneling protocols as recited in claims 9 and 31. The Examiner respectfully disagrees, Shrader shows various tunnel definitions may be loaded and the system is capable of using various protocols (column 6, lines 25-37).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nguyen et al (US PGPUB US2002/0016926) teaches integrating tunneling protocols with standard routing protocols.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is 571-272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2141

BJG
8/29/2007

JASON CARDONE
SUPERVISORY PATENT EXAMINER